## MW4200 Fiber Ranger

## The Solution of Fiber Link Maintenance and Test



User Manual (Version 1.0)

#### 1 .General Information

MW4200 Fiber Ranger is newly designed fiber optic tester, it aims at fiber fiber network installation, fiber network engineering acceptance and fiber network maintenance. It can detect fiber fault location more accurate and quick, and designed for field use. MW4200 fiber ranger is an economical tester instead of OTDR in the test and maintenance of fiber network.

#### 2. Main Features

- 1) Easy to identify the faults location
- 2) Analysis reflection events and attenuation events automatically
- 3) Build-in visual fault locator function
- 4) Automatic Pulse Width Control design to ensure a convenientoperation.
- 5) Up to 2500 measurement results can be stored in the unit.

## 3. Specifications

Model	MW4200					
Operating Wavelength	1550 ± 20					
Fiber Type	9/125 um					
Optical Connector Type	FC/PC					
Detector Type	InGaAs APD					
Pulse Width	Auto adjustment					
Max.Distance ( km ) ①	60					
Distance Accuracy	± (3m + 2*10^-4 * distance)					
( Reflection Event ) (m)2						
Ref lection Event Dead Zone(m)(3)	15m					
Power Supply	AA,3pcs					
<b>Battery Operating Time</b>	> 2500					
Auto Power-off time (min) 4	10					
VFL output power(mW)	> 1 mW					
Data Storage Capacity (5)	2000					
Working Temperature(℃)	-5 ~ 40					
Storage Temperature(°C)	-10 ~ 70					
Dimensions(mm)	175*90*44.5					
Weight(g)6	278					

#### **NOTES:**

- ① The max test distance 60km means MW4200 can detect the reflection events, which loss is >1dB in 60km of dynamic range; The detect distance of non-reflection event is 40km(>1dB).
- ②Distance accuracy depends on the length of measured distance length, if measured distance is 30km, the accuracy is  $\pm$  (3m + 2\*10^-4 \*  $30*10^-3$ ) =  $\pm 9m_{\circ}$
- 3 Reflection Event Dead Zone means that the minimum dead zone of reflection event under the minimum pulse width.
- ④ Auto power-off time is 10 minutes. If turn on fiber ranger and no operation in 10 minutes, the unit will turn off automatically. If turn on 30s later and no operation, the back light will be off, then press any key, back light will be on again.
- ⑤ Fiber ranger can save up to 2000 measurement results in the unit; The data that save in the unit is shows by the mode of date&No, user will know the test time clearly when they check the data,.
- <sup>®</sup> The bare unit weight without battery, according to customers require different customized wavelength, the unit weight may vary slightly.

## 4 . Standard Package

1. MW4200 fiber ranger	1
2. User Manual	1
3.USB 1	1
4.Cleaning Swab 1	
5.Battery3	3
6.CD 1	
7. Certification 1	l

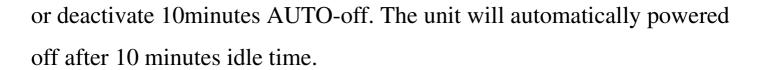
## 5. Panel&Function



5-1 Appearance

## 5-2 Keypad&Panel

Short press for Power ON the unit. Long press (over 3s) to activate



Under the test mode, press this key to enter OTDR mode test the under- test fiber and display the results in the screen.

Press this key to activate the VFL module. (User only can operate those function of VFL such as turn on/off, 1Hz switch on the main interface and event scanning interface).

Check saved data, choose one data, long press(over 2s) the key to read all information of the data, and press the key to delete the data.

Under test mode, when it has multiple measurements, user can press this keypad to review the previous measurement.

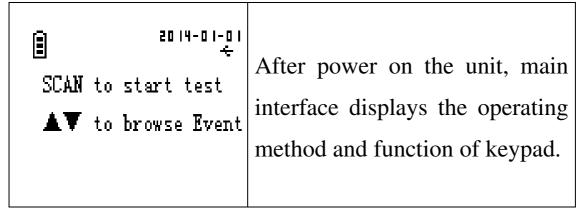
Under test mode, when it has multiple measurements, user can press this keypad to review the next measurement.

Press the key to save the current test data.

# 5-3 Operation 5-3-1Power On the Fiber Ranger and enter into Test Mode.

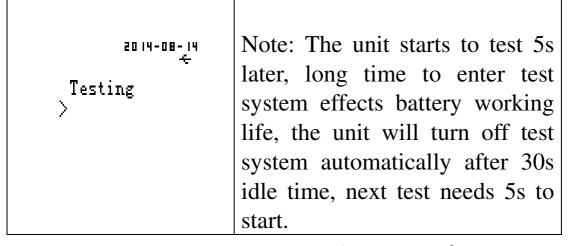
	V XX.XX : The unit version					
	number.					
Self Check V1.4	Press <b>\( \)</b> to power on the unit then					
File> OK	switch language between					
V-APD> OK	Chinese&English					
RAM> OK	The following functions are					
	available before the unit leaves the					
	factory.					
	File is to save data and test data.					
	V-APD is to test optical device.					
	RAM is to test data progressing					
	unit.					

## 5-3-1 Power On Self Test Interface 5-3-2 Main Interface



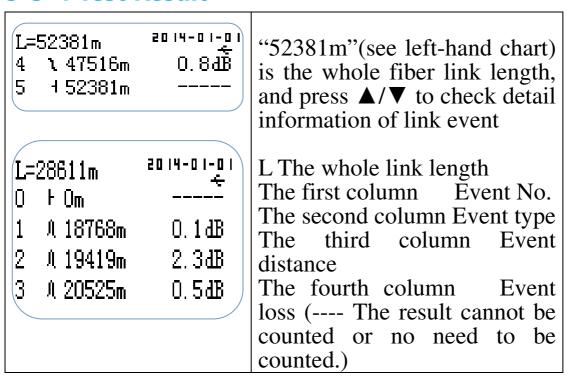
#### 5-3-2 Main Interface

## 5-3-3 Testing



## **5-3-3 Testing Interface**

#### 5-3-4 Test Result



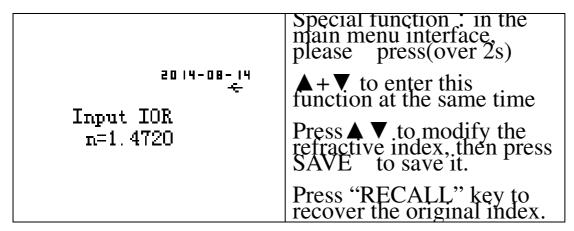
#### 5-3-4 Result Interface

#### 5-3-5Historical Record

History	2014-08-14	Historical record , the
14081100 14081101	Length: 49136m	components of record is:
14081102 14081400		date and S/N., there is only
14001400	-	100pcs records every day
		as the limited of the length
		( changing the date can be
		saved continuously of the
		record).

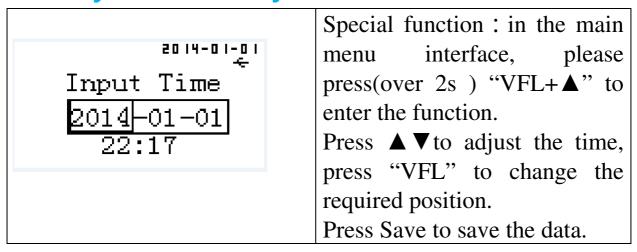
## 5-3-5Historical Record

## 5-3-6Modify The Refractive Index



5-3-6 Modify the refractive index

#### **5-3-7 System Time Adjustment**



5-3-7System Time Adjustment

#### 5-3-8Format Storage

In the historical record interface, please press SCAN+SAVE at the same time around 2s, the system start to format, the storage delete all of the data (except time, refractive index), there will be a window to remind success after finish the process.

#### 5-3-9 Save test trace

Press "VFL" and "SAVE" keys simultaneously for 2s to activated or deactivated the trace saved function (it shows on the screen prompts), after finish measurement every time, if user want to save trace, please

press "SAVE" key to save the trace; if doesn't, please press any other key to quit. User can check the saved trace on computer. Press "VFL"and "▼"keys simultaneously for 2s to activate USB, now attached to a computer via USB, the computer will find out the 8M capacity USB, and "cr" file is referred to save trace file in "CURVE"folder.

**Notes:** The instrument doesn't support the maintenance function of trace file, it means that the trace file that you no longer use only delete through USB on computer.

#### 6 .Maintenance

- 1) Keep the fiber output ports are clean, Please clean them regularly with the pure Alcohol cotton swabs.
- 2) Keep the dust-proof cap clean and cover it after the test, pls keep the USB port and connector are clean at the same time.
- 3) Turn off the unit and keep the output ports inactive when cleaning. Otherwise, it will lead to dangerous radiation harms.
- 4)Pls use a standard optical adapter to connect with output port, otherwise, the sensor port can be damaged and the whole system performance will be affected.
- 5) Take out the batteries when not in use for a long time.

#### 7 .Notices

1) There are laser and sensor inside the unit. Please do not point the optical sources to the sensors directly, otherwise the sensor will be damaged

- 2 ) Do not expose the unit to the sun directly.
- 3 ) Do not look at the output ports directly when it is turned on.
- 4) Before "scanning", ensure the tested fiber is well connected to the "OTDR port" or "VFL port". Do not plug in/out the fiber during the test.

## 8 .Warranty

#### Details of warranty terms and conditions are given as below:

- 1) Myway warrants that MW4200 Fiber Ranger will be free from defects in material and workmanship for a period of 18 months. The date will be started from the date of goods shipment.
- 2) If any defectives happened due to quality problems of the product during the warranty period, Myway promises to repair or replace free of charge. But the freight cost and related taxes will be shared by both parties. Myway will pay the shipping cost from customer side to Myway and pay the import taxes in China. Customer will pay the shipping cost from seller. to customer side and its local import taxes accordingly.
- 3) This warrantyis limited to defects in workmanship and materials and does not cover damages from accident, acts of god, neglect, wrong usage or abnormal conditions of operation.
- 4) Myway will charge corresponding fees for the cost of materials, repair and shipping in conditions of below:
  - 1.Defects occurred under normal use and service but out of the warranty period.
  - 2. Failures and damages occurred do not because of defects in material

and workmanship of products.

receiving units.

3. Failures and damages occurred because of failing to comply with the Operation Instruction and necessary attention.

4.abnormal conditions of operation or handling:

Such as artificial damage, or operating in abnormal conditions of like high temperature, high voltage, humidity and etc., seller will charge depend on the actual failure rating.

#### **Warranty Registration Card**

Serial Number:											
Model	Numbe	er:									
Date o	f Purch	ase:									
Compa	any Nar	ne:									
Compa	any Add	lress:									
TEL:	FAX:										
E-mail	l:										
Note:	Please	fax	this n	ote	within	one	month	from	the	date	of